from the object received from a second average optical depth, wherein the second average optical depth is different from the first average optical depth;

a processor, wherein the processor receives data generated by the first spectrometer system and the second spectrometer system, wherein [an] optical [measurement of a sample under test is produced] properties of the object are determined based on [the] data generated by the first and second spectrometer systems.

Please add the following new claims:

2. The system of claim 1, wherein the first set of the plurality of light receivers comprises a single light receiver.

3. The system of claim 1, wherein the second set of the plurality of light receivers comprises a plurality of light receivers.

4. The system of claim 1, wherein the one or more light sources and the plurality of light receivers are configured so that one or more of the plurality of light receivers do not propagate light that is specularly reflected from a surface of the object.

5. The system of claim 4, wherein the object comprises a translucent object.

6. The system of claim 1, wherein the processor determines optical properties of the object based on applying first and second factors to the data generated by the first spectrometer system and the second spectrometer system, respectively.

7. The system of claim 6, wherein the first and second factors vary depending upon a type of the object.

8. The system of claim 1, wherein the probe tip is coupled to a body, wherein the body encloses the first spectrometer system and the second spectrometer system, wherein optical properties of the object are determined by positioning the probe tip in proximity of the object, wherein a user's hand substantially encompasses at least a portion of the body enclosing the first and second spectrometer systems, wherein the system comprises a handheld spectrophotometer.

9. A system for determining optical properties of an object, comprising:

a probe tip including one or more light sources and a plurality of light receivers;

a first spectrometer system receiving light from a first set of the plurality of light receivers, wherein the first spectrometer system generates data having a first sensitivity based on a thickness of a material of the object;

a second spectrometer system receiving light from a second set of the plurality of light receivers, wherein the second spectrometer system generates data having a second sensitivity based on a thickness of a material of the object, wherein the second sensitivity is different from the first sensitivity;

a processor, wherein the processor receives data generated by the first spectrometer system and the second spectrometer system, wherein optical properties of the object are determined based on data generated by the first and second spectrometer systems.

10. The system of claim 9, wherein the first set of the plurality of light receivers comprises a single light receiver.

11. The system of claim 9, wherein the second set of the plurality of light receivers comprises a plurality of light receivers.

12. The system of claim 9, wherein the one or more light sources and the plurality of light receivers are configured so that one or more of the plurality of light receivers do not propagate light that is specularly reflected from a surface of the object.

13. The system of claim 12, wherein the object comprises a translucent object.

14. The system of claim 9, wherein the processor determines optical properties of the object based on applying first and second factors to the data generated by the first spectrometer system and the second spectrometer system, respectively.

15. The system of claim 14, wherein the first and second factors vary depending upon a type of the object.

16. The system of claim 9, wherein the probe tip is coupled to a body, wherein the body encloses the first spectrometer system and the second spectrometer system, wherein optical properties of the object are determined by positioning the probe tip in proximity of the object, wherein a user's hand substantially encompasses at least a portion of the body enclosing the first and second spectrometer systems, wherein the system comprises a handheld spectrophotometer.

17. A system for determining optical properties of an object, the system including a probe tip having one or more light sources and one or more light receivers, wherein the probe tip is positioned in proximity to the object, wherein the probe tip is encompassed by a removable barrier, wherein the barrier has a first, inner surface positioned adjacent the probe tip that has surface characteristics to facilitate insertion of the probe tip into the barrier, wherein the barrier

has a second, outer surface that comes into contact with the object and that has surface characteristics to resist sliding of the probe tip with respect to the object when the outer surface is in contact with the object, wherein light from the one or more light sources is returned from the object through the barrier to the one or more light receivers, wherein light received by the one or more light receivers is measured by one or more spectrometer systems, wherein optical properties of the object are determined.

18. The system of claim 17, wherein the one or more light sources and the one or more light receivers are configured so that at least one of the light receivers does not propagate light that is specularly reflected from a surface of the object.

19. The system of claim 18, wherein at least one calibration measurement of a second object of known optical properties is taken, wherein optical effects of the barrier are compensated by the calibration measurement.

20. The system of claim 18, wherein the one or more light receivers comprise a plurality of light receivers, wherein a first spectrometer system receives light from a first set of the plurality of light receivers, wherein the first spectrometer system generates data having a first sensitivity based on a thickness of a material of the object, wherein a second spectrometer system receives light from a second set of the plurality of light receivers, wherein the second spectrometer system generates data having a second sensitivity based on the thickness of a material of the object, wherein the second sensitivity is different from the first sensitivity, wherein a processor receives data generated by the first spectrometer system and the second spectrometer system, wherein optical properties of the object are determined based on data generated by the first and second spectrometer systems.

CLAIMS AFTER THE AMENDMENTS HEREIN (CLEAN FORM)

1. (amended) A system for determining optical properties of an object, comprising:

a probe tip including one or more light sources and a plurality of light receivers;

a first spectrometer system receiving light from a first set of the plurality of light receivers, wherein the first set of the plurality of light receivers is arranged with respect to the one or more light sources so that the first spectrometer system generates data based on light from the object received from a first average optical depth;

a second spectrometer system receiving light from a second set of the plurality of light receivers, wherein the second set of the plurality of light receivers is arranged with respect to the one or more light sources so that the second spectrometer system generates data based on light from the object received from a second average optical depth, wherein the second average optical depth is different from the first average optical depth;

a processor, wherein the processor receives data generated by the first spectrometer system and the second spectrometer system, wherein optical properties of the object are determined based on data generated by the first and second spectrometer systems.

2. The system of claim 1, wherein the first set of the plurality of light receivers comprises a single light receiver.

3. The system of claim 1, wherein the second set of the plurality of light receivers comprises a plurality of light receivers.

4. The system of claim 1, wherein the one or more light sources and the plurality of light receivers are configured so that one or more of the plurality of light receivers do not propagate light that is specularly reflected from a surface of the object.

5. The system of claim 4, wherein the object comprises a translucent object.

6. The system of claim 1, wherein the processor determines optical properties of the object based on applying first and second factors to the data generated by the first spectrometer system and the second spectrometer system, respectively.

7. The system of claim 6, wherein the first and second factors vary depending upon a type of the object.

8. The system of claim 1, wherein the probe tip is coupled to a body, wherein the body encloses the first spectrometer system and the second spectrometer system, wherein optical

properties of the object are determined by positioning the probe tip in proximity of the object, wherein a user's hand substantially encompasses at least a portion of the body enclosing the first and second spectrometer systems, wherein the system comprises a handheld spectrophotometer.

9. A system for determining optical properties of an object, comprising:

a probe tip including one or more light sources and a plurality of light receivers;

a first spectrometer system receiving light from a first set of the plurality of light receivers, wherein the first spectrometer system generates data having a first sensitivity based on a thickness of a material of the object;

a second spectrometer system receiving light from a second set of the plurality of light receivers, wherein the second spectrometer system generates data having a second sensitivity based on a thickness of a material of the object, wherein the second sensitivity is different from the first sensitivity;

a processor, wherein the processor receives data generated by the first spectrometer system and the second spectrometer system, wherein optical properties of the object are determined based on data generated by the first and second spectrometer systems.

10. The system of claim 9, wherein the first set of the plurality of light receivers comprises a single light receiver.

11. The system of claim 9, wherein the second set of the plurality of light receivers comprises a plurality of light receivers.

12. The system of claim 9, wherein the one or more light sources and the plurality of light receivers are configured so that one or more of the plurality of light receivers do not propagate light that is specularly reflected from a surface of the object.

13. The system of claim 12, wherein the object comprises a translucent object.

14. The system of claim 9, wherein the processor determines optical properties of the object based on applying first and second factors to the data generated by the first spectrometer system and the second spectrometer system, respectively.

15. The system of claim 14, wherein the first and second factors vary depending upon a type of the object.

16. The system of claim 9, wherein the probe tip is coupled to a body, wherein the body encloses the first spectrometer system and the second spectrometer system, wherein optical

properties of the object are determined by positioning the probe tip in proximity of the object, wherein a user's hand substantially encompasses at least a portion of the body enclosing the first and second spectrometer systems, wherein the system comprises a handheld spectrophotometer.

17. A system for determining optical properties of an object, the system including a probe tip having one or more light sources and one or more light receivers, wherein the probe tip is positioned in proximity to the object, wherein the probe tip is encompassed by a removable barrier, wherein the barrier has a first, inner surface positioned adjacent the probe tip that has surface characteristics to facilitate insertion of the probe tip into the barrier, wherein the barrier has a second, outer surface that comes into contact with the object and that has surface characteristics to resist sliding of the probe tip with respect to the object when the outer surface is in contact with the object, wherein light from the one or more light sources is returned from the object through the barrier to the one or more light receivers, wherein light received by the one or more light receivers is measured by one or more spectrometer systems, wherein optical properties of the object are determined.

18. The system of claim 17, wherein the one or more light sources and the one or more light receivers are configured so that at least one of the light receivers does not propagate light that is specularly reflected from a surface of the object.

19. The system of claim 18, wherein at least one calibration measurement of a second object of known optical properties is taken, wherein optical effects of the barrier are compensated by the calibration measurement.

20. The system of claim 18, wherein the one or more light receivers comprise a plurality of light receivers, wherein a first spectrometer system receives light from a first set of the plurality of light receivers, wherein the first spectrometer system generates data having a first sensitivity based on a thickness of a material of the object, wherein a second spectrometer system receives light from a second set of the plurality of light receivers, wherein the second spectrometer system generates data having a second sensitivity based on the thickness of a material of the object, wherein the second sensitivity is different from the first sensitivity, wherein a processor receives data generated by the first spectrometer system and the second spectrometer system, wherein optical properties of the object are determined based on data generated by the first and second spectrometer systems.